

WHAT IS CLAIMED IS:

1. A method of manufacturing a semiconductor device comprising the steps of:

(a) depositing sequentially and patterning a predetermined first metal film and an antireflection film including a dielectric layer on a semiconductor substrate to form a lower electrode having said antireflection film on its upper surface;

(b) forming an interlayer insulation film on said lower electrode and forming first and second openings respectively in a capacitor element forming region of and a contact forming region of said interlayer insulation film on said lower electrode;

(c) removing said antireflection film in said second opening; and

(d) depositing a predetermined second metal film on said interlayer insulation film having said first and second openings and removing said second metal film other than said second metal film in said first and second openings, to form an upper electrode of said capacitor element in said first opening and a contact in said second opening.

2. The method of manufacturing a semiconductor device according to claim 1, further comprising the step of:

(e) depositing and patterning a predetermined third metal film on said interlayer insulation film to form an interconnect line which is individually connected to said contact and said upper electrode,

said step (e) being performed after said step (d).